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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/591,841

12/26/2006

Henning Frederiksen

IRF0037US.NP

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26259 7590 04/17/2009

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EXAMINER

LEWIS, BEN

ART UNIT

PAPER NUMBER

1795

NOTIFICATION DATE

DELIVERY MODE

04/17/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

poreilly@licataandtyrrell.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/591,841	<b>Applicant(s)</b> FREDERIKSEN ET AL.	
	<b>Examiner</b> Ben Lewis	<b>Art Unit</b> 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 January 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

**Detailed Action**

1. The Applicant's request for reconsideration filed on January 7<sup>th</sup>, 2009 was received.
2. The text of those sections of Title 35, U.S.C. code not included in this action can be found in the prior Office Action (issued on October 9<sup>th</sup>, 2008).

***Claim Rejections - 35 USC § 102***

3. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamazaki et al. (U.S. Pub. No. 2002/0119359 A1).

With respect to claims 1 and 3, Yamazaki et al. disclose a polymer electrolyte fuel cell wherein .the plurality of conductive separators comprise at least one separator comprising: a fuel gas inlet-side manifold aperture (active) ; a fuel gas outlet-side manifold aperture (passive); a gas flow channel for supplying the fuel gas to the anode which is formed on an anode-side of the separator; an inlet-side through hole and an outlet-side through hole penetrating the separator which are formed at an inlet-side end and an outlet-side end of the gas flow channel for fuel gas; and an inlet-side connection groove and an outlet-side connection groove for connecting the inlet-side and outlet-side through holes with the fuel gas inlet-side manifold aperture and the fuel gas outlet-side manifold aperture, respectively, which are formed on a cathode-side of the separator (Paragraph 0016).

Yamazaki et al. also teach that the at least one separator further comprises: an oxidant gas inlet-side manifold aperture (active manifold); an oxidant gas outlet-side manifold aperture (passive manifold); a gas flow channel for supplying the oxidant gas to the cathode which is formed on the cathode-side; an inlet-side through hole and an outlet-side through hole penetrating the separator which are formed at an inlet-side end and an outlet-side end of the gas flow channel for oxidant gas; and an inlet-side connection groove and an outlet-side connection groove for connecting the inlet-side and outlet-side through holes with the oxidant gas inlet-side manifold aperture and the oxidant gas outlet-side manifold aperture, respectively, which are formed on the anode-side (Paragraph 0034).

The fuel gas supplied to the inlet-side manifold aperture 12a passes through the connection grooves 26a formed on the cathode-side of the separator 10 and the through holes 25a penetrating the separator 10 and reaches the gas flow channels 24 formed on the anode-side to be supplied to the anode. An excessive gas and a gas generated by the electrode reaction pass from the gas flow channels 24 through the through holes 25b (passive manifold) penetrating the separator 10 and the connection grooves 26b formed on the cathode-side and reach the outlet-side manifold aperture 12b to be discharged (Paragraph 0065).

The cathode-side separator member 40 and the anode-side separator member 50, combined to each other with their backsides having the cooling water flow channels 47 and 57 in contact with each other, are inserted between the MEAs. FIG. 8 is a cross-sectional view of a cell stack in which the combination of the cathode-side

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separator member 40 and anode-side separator member 50 is alternately inserted with the separator 10 between the MEAs (Paragraph 0073).

With respect to claim 2, Examiner notes that in Fig. 2 (cathode side channels) and Fig. 3. (anode side channels) are arranged to flow perpendicular with respect to each other.

With respect to claim 4, Yamazaki et al. teach that the cathode-side separator member 40 and the anode-side separator member 50, combined to each other with their backsides having the cooling water flow channels 47 and 57 in contact with each other, are inserted between the MEAs. FIG. 8 is a cross-sectional view of a cell stack in which the combination of the cathode-side separator member 40 and anode-side separator member 50 is alternately inserted with the separator 10 between the MEAs (Paragraph 0073).

### ***Response to Arguments***

4. Applicant's arguments filed on January 7<sup>th</sup>, 2009 have been fully considered but they are not persuasive.

*Applicant's principal arguments are*

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(a) The pending claims are clearly distinguishable from Yamazaki et al. (U.S. Pub. No. 2002/0119359) as Yamazaki et al. neither teaches nor suggests an embodiment with two **interconnected manifolds** for each reactant supply and outflow.

In response to Applicant's arguments, please consider the following comments.

(a) Examiner notes that, Yamazaki et al. disclose a polymer electrolyte fuel cell wherein .the plurality of conductive separators comprise at least one separator comprising: a fuel gas inlet-side manifold aperture (active) ; a fuel gas outlet-side manifold aperture (passive); a gas flow channel for supplying the fuel gas to the anode which is formed on an anode-side of the separator; an inlet-side through hole and an outlet-side through hole penetrating the separator which are formed at an inlet-side end and an outlet-side end of the gas flow channel for fuel gas; and an inlet-side connection groove and an outlet-side connection groove for connecting the inlet-side and outlet-side through holes with the fuel gas inlet-side manifold aperture and the fuel gas outlet-side manifold aperture, respectively, which are formed on a cathode-side of the separator (Paragraph 0016). Examiner notes that since the fuel gas inlet-side manifold aperture and the fuel gas outlet-side manifold aperture, respectively, which are formed on a cathode-side of the separator are connected then these are two reactant supply and outflow manifolds which are interconnected.

***Conclusion***

5. **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ben Lewis whose telephone number is 571-272-6481. The examiner can normally be reached on 8:30am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ben Lewis/  
Examiner, Art Unit 1795

/PATRICK RYAN/  
Supervisory Patent Examiner, Art Unit 1795